



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/554,481

10/24/2005

Diane M. Artman

3226-01

7557

26645

7590

09/17/2010

THE LUBRIZOL CORPORATION  
ATTN: DOCKET CLERK, PATENT DEPT.  
29400 LAKELAND BLVD.  
WICKLIFFE, OH 44092

EXAMINER

OLADAPO, TAIWO

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

09/17/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/554,481	<b>Applicant(s)</b> ARTMAN ET AL.	
	<b>Examiner</b> TAIWO OLADAPO	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15, 18 and 20-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15, 18 and 20-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

Art Unit: 1797

### **DETAILED ACTION**

1. The arguments dated 07/12/2010 has been considered but they are not persuasive.

Therefore, the previous rejection is maintained.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

Art Unit: 1797

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1 – 5, 9, 10, 11, 13 – 15, 18, are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakazato et al. (JP 2002-053888)

6. In regards to claims 1, 15, 18, Nakazato teaches a lubricant composition for lubricating diesel engines comprising 0.1 up to 1% sulfated ash, 0.01 up to 0.1 % phosphorus and 0.01 up to 0.3% sulfur by weight which overlaps the claimed ranges (abstract). The lubricant comprises base oil [0008], sulfurized olefin antiwear which is nitrogen free [0039], and a nitrogen-based dispersant that can be present as Dispersant B and C at 5.2% by weight which meets the claimed range [0049]. In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). Nakazato therefore provides for the process of lubricating a compression ignited engine (diesel engine) by teaching the lubricant having the additives in required amounts, which when added to the engine intrinsically performs the claimed process.

7. In regards to claim 2, Nakazato provides for the method of lubrication, wherein the lubricant comprises metal containing cleansing agent or detergent having a base number of 350 mgKOH/g which is an overbased detergent [0008].

8. In regards to claim 3, Nakazato provides for the method wherein the detergent is a salicylate [0022].

9. In regards to claim 4, Nakazato provides for the method wherein the process is directed towards providing lubricants for heavy duty diesel engines [0005].

Art Unit: 1797

10. In regards to claims 5, 9, 10, 11, 13, 14, 22, the teachings of Nakazato above are incorporated by reference herein.

11. In regards to claims 5, 14, Nakazato teaches lubricating oils for diesel engines wherein the lubricant comprises the additives, sulfur, phosphorus and ash contents at overlapping amounts with the claim.

12. In regards to claim 9, Nakazato teaches the lubricant comprises zinc dialkyl phosphorodithioate which are dithiophosphate esters [0030]. The dithiophosphates (zddp) are preferably secondary alkyl groups which improves wear [0031].

13. In regards to claims 10, 11, Nakazato teaches the lubricant comprises hindered phenolic or aminic antioxidants [0032, 0033].

14. In regards to claim 13, Nakazato teaches the lubricants, wherein the overbased detergent which is component (d) of the claim is present in the amount of from 0.1 up to 1% by weight which overlaps the claimed range [0008].

15. In regards to claim 22, Nakazato teaches the lubricant, wherein the dispersant can be present at 5.2% which meets the limitation and the detergent can be present at 0.1 up to 1% which overlaps the claimed range.

***Claim Rejections - 35 USC § 103***

16. Claims 6, 7, 12, 21, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakazato et al. (JP 2002-053888) in view of Gatto (US 5,840,672)

17. In regards to claims 6, 7, 12, Nakazato teaches the lubricant composition comprising sulfurized olefins but does not recite a specific type. Gatto teaches a low phosphorus, low sulfur lubricant suitable for lubricating diesel engines similar to Nakazato (abstract, column 1 lines 47 –

Art Unit: 1797

59 & Example 4). Gatto teaches that the lubricant comprises sulfurized C<sub>4</sub> – C<sub>25</sub> alphaolefins which meets the limitations of claim 6 (column 3 lines 1 – 18). The sulfurized olefins can be present in the composition at i.e., 0.7% by weight which meets the limitation of component (b) in claim 12 (Table 1). Gatto teaches the composition can comprise succinimide dispersants or component (c) of the instant invention, which is present in amounts of about 3 up to 10% by weight which meets the limitations of claim 7 (column 6 lines 31 – 43). It would have been obvious for one of ordinary skill in the art at the time of the invention to have used the sulfurized olefins of Gatto in the lubricant of Nakazato, as Gatto teaches they are suitable for use in lubricants for diesel engines.

18. In regards to claims 21, 22, Nakazato and Gatto combined teach the composition and provide for the method, wherein the lubricant comprises the recited additives of components (b)(c)and (d) in the recited or overlapping amounts as previously recited above.

***Claim Rejections - 35 USC § 103***

19. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakazato et al. (JP 2002-053888) in view of Boffa et al. (US 5,804,537)

20. In regards to claim 8, Nakazato provides for the method but does not particularly recite the concentration of zinc dialkyl dithiophosphates (ZDDP). Boffa is added to recite low phosphorus lubricating oils for diesel engines similar to Nakazato (column 10 lines 10 – 15; Example 2). Boffa teaches the composition can comprise ZDDP present at 0.86% which meets the limitations of claim 8 (Table 2). It would have been obvious for one of ordinary skill in the art at the time of the invention to use the ZDDP of Boffa in the lubricant of Nakazato, as Boffa provides suitable amounts of ZDDP that can be used in low phosphorus diesel oils.

***Claim Rejections - 35 USC § 103***

21. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakazato et al. (JP 2002-053888) in view of Igarashi et al. (US 5,912,212)

22. In regards to claim 20, Nakazato teaches the lubricant composition which comprises antioxidants but does not recite the antioxidant of the claim. Igarashi teaches a lubricating oil composition containing 3-methyl-5-tert-butyl-4-hydroxyphenyl substituted fatty acid ester present in the amount of from 0.1 to 5% which is an antioxidant (column 1 lines 43 – 50; column 2 lines 3 – 23). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the ingredients of Igarashi to the invention of Nakazato, as Igarashi teaches it is suitable as an antioxidant in lubricating oils.

***Response to Arguments***

23. Applicant's arguments have been fully considered but they are not persuasive.

24. The applicants have provided a Declaration to obviate the rejection under Nakazato. The Declaration under 37 CFR 1.132 by Virginia Carrick, dated 07/12/2010 has been considered. Carrick compares a formulation of the claimed invention comprising two kinds of sulfurized olefins with a formulation of Nakazato comprising antioxidant/antiwear according to paragraph 0039, but without the sulfurized olefin compounds taught. The results show improved antiwear performance for examples comprising sulfurized olefins over the examples of Nakazato having none. The results of the experiments are not persuasive as they fail to consider compositions of Nakazato comprising sulfurized olefins. It is unclear if the examples of Nakazato will show

Art Unit: 1797

similar improved antiwear performance when sulfurized olefin components taught in paragraph 0039 is present.

***Conclusion***

25. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAIWO OLADAPO whose telephone number is (571)270-3723. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571)272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 1797

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TO

/Ellen M McAvoy/  
Primary Examiner, Art Unit 1797